PROCENTEC

Network Condition Indicator v1.3.0

User Manual

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Safety Guidelines
This manual contains notices which you should observe to ensure your own personal safety, as well as to protect the product and connected equipment. These notices are highlighted in the manual by a warning sign and are marked as follows according to the level of danger:

ⓘ Draws your attention to important information on handling the product, a particular part of the documentation or the correct functioning of the product.

Warranty
Warranty is void if you open the Appdongle.

Disclaimer of Liability
We have checked the contents of this manual as much as possible. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the content in this manual is reviewed regularly and necessary corrections will be included in subsequent editions. Suggestions for improvements are welcome.

Important information

Purpose of the Manual
This user manual provides information how to work with the Network Condition Indicator.

Recycling and Disposal
The parts of the Appdongle can be recycled. For further information about environment-friendly recycling and the procedure for disposing of your old equipment, please contact:

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Document Updates
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1. Product description

1.1 Introduction

The Network Condition Indicator for ComBricks is a convenient tool to monitor multiple ComBricks sets simultaneously. It features a traffic light indicator, similar to the traffic light in ProfiTrace, to monitor the status of your PROFIBUS network(s).

It turns red when critical problems occur, or yellow when less critical issues arise. This enables maintenance crew to react directly to a problem. One click on the red ComBricks reveals the problem in simple words.

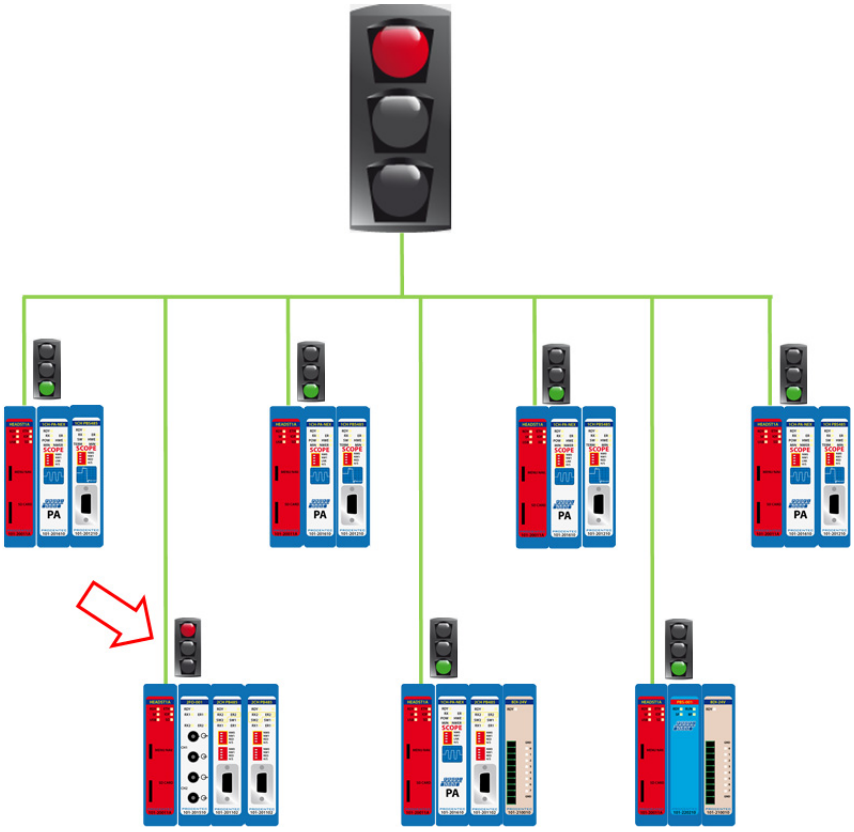


Fig. 1 – Schematic overview. If one ComBricks has a critical problem, the Network Condition Indicator turns red

1.2 Product features

- Real time overview of all ComBricks
- Easy access to individual ComBricks sets
- One interface to reset all measurements of all ComBricks
- Minimized and stay-on-top mode
- Multi-language support

1.3 Detectable faults

- Lost devices
- Syncs
- Repeats/retries
- Illegal telegrams
- Critical Diagnostics (Ext. Diag)
- Idle voltage problems (Scope module required)
- Amplitude (Bargraph) problems on specific devices (Scope or PA module required)
- PA fault problems: jitter, noise or DC voltage (PA module required)
- System warnings

1.4 System requirements

In order to use the Network Condition Indicator and all sub programs, your computer system should include the hardware and software listed below. The software has been tested to work on Windows 7 and Windows 8.

Minimum requirements:

- Microsoft Windows 7
- 600 MHz Intel Pentium III processor or equivalent
- 1024 MB of RAM
- 1024x768 resolution display
- 1 free USB 2.0 high-speed interface port (for Appdongle, required to monitor 4 or more ComBricks)
- 1 free 100Mbit Ethernet port
- 1 mouse or other pointing device

Recommended (differences from minimum):

- 2048MB of RAM
- 1280 x 1024 resolution display or better

2. Software installation instructions

This chapter describes the installation for the Network Condition Indicator. It is assumed that you have a basic knowledge of Windows operating systems. All examples and dialogs are based on a US/UK based Windows installation and may differ slightly based on upgrades, updates and enhancements. Please use the screenshots in conjunction with the description in order to press the appropriate buttons and other user interface items.

2.1 Installation procedure and license

You can run the Network Condition Indicator directly from the USB stick without having to install it on your PC. You may also choose to store the program files locally on your hard drive.

If you are using an Appdongle with license (required if you want to monitor more than 3 ComBricks sets), you need to place the Appdongle in a free USB port. The license must be present on the Appdongle or in the same folder as the executable of the Network Condition Indicator. If for some reason the license is not present on the Appdongle or your hard drive, choose 'Help – License info' in the main menu bar of the Network Condition Indicator.

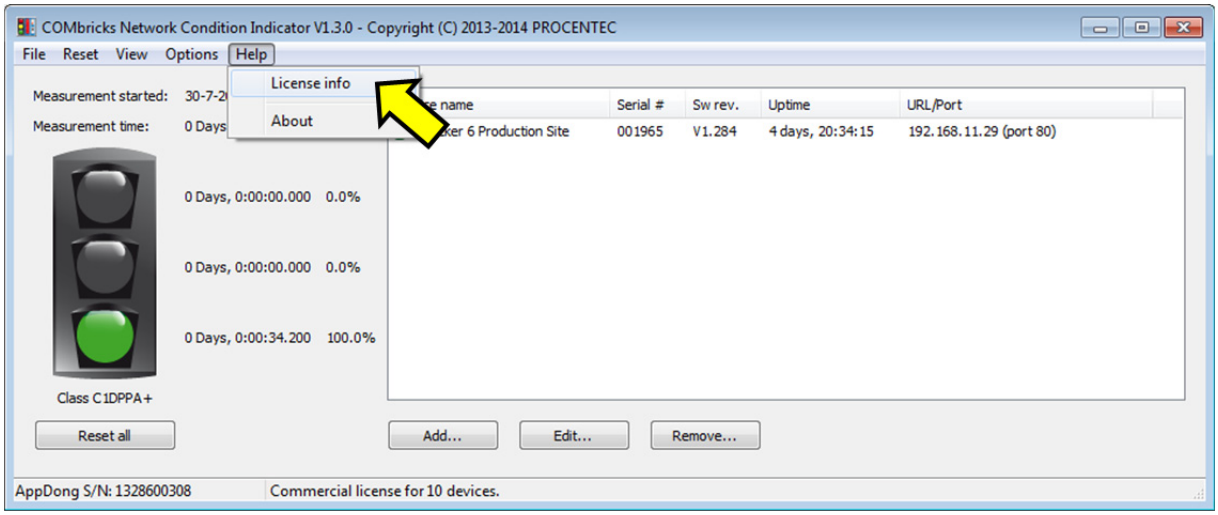


Fig. 2 - Accessing the license info tool

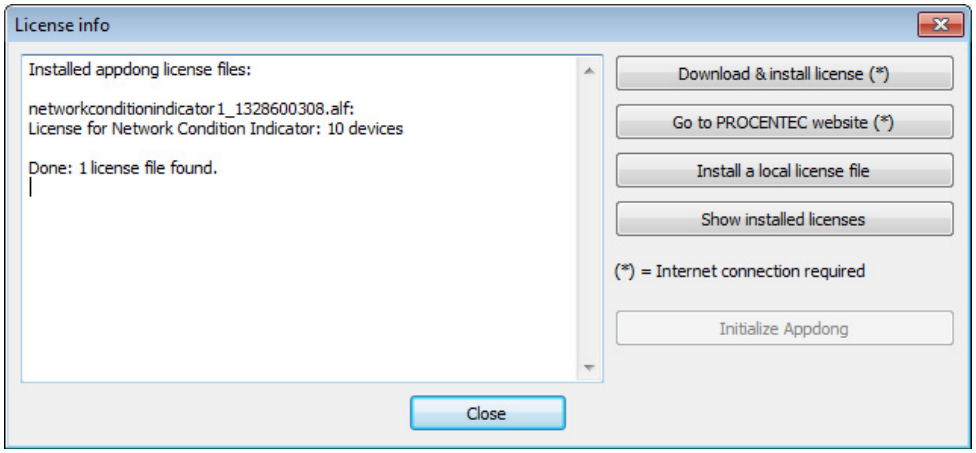


Fig. 3 - License info tool showing the list of installed licenses

Check if the license is present by clicking 'Show installed licenses'. If there is no license present, make sure you are connected to Internet and click 'Download & install license'. This will read the serial number of the

Appdongle, and search for the license on our webserver. If the license is present it will be installed in the same directory as the application.

If you need to install the license manually, choose ‘Install a local license file’.

2.2 Free license limitations

If you have no license for the Network Condition Indicator, you can use the program for up to 3 ComBricks Head Stations. Other limitations of the free license are:

- No tray icon
- No ‘Minimized’ mode
- Connection to Head Stations with password disabled
- No option to ignore System warnings
- The Measurement counter stops after 99 days

2.3 Updates

It is the policy of PROCENTEC to release periodic updates.

To update your Network Condition Indicator version, simply download the new ZIP file from our website and copy the contents of the ZIP file to your Appdongle or local hard drive. This will overwrite your previous version. If you want to keep the previous version you can make a backup of it on the USB stick.

3. Main interface window

The Network Condition Indicator has a main window with menu bar and status bar. It allows easy access to all features of the program. It also displays a traffic light with measurement time and a list of all connected ComBricks, including their status, serial number, firmware version, uptime, IP address and used port.

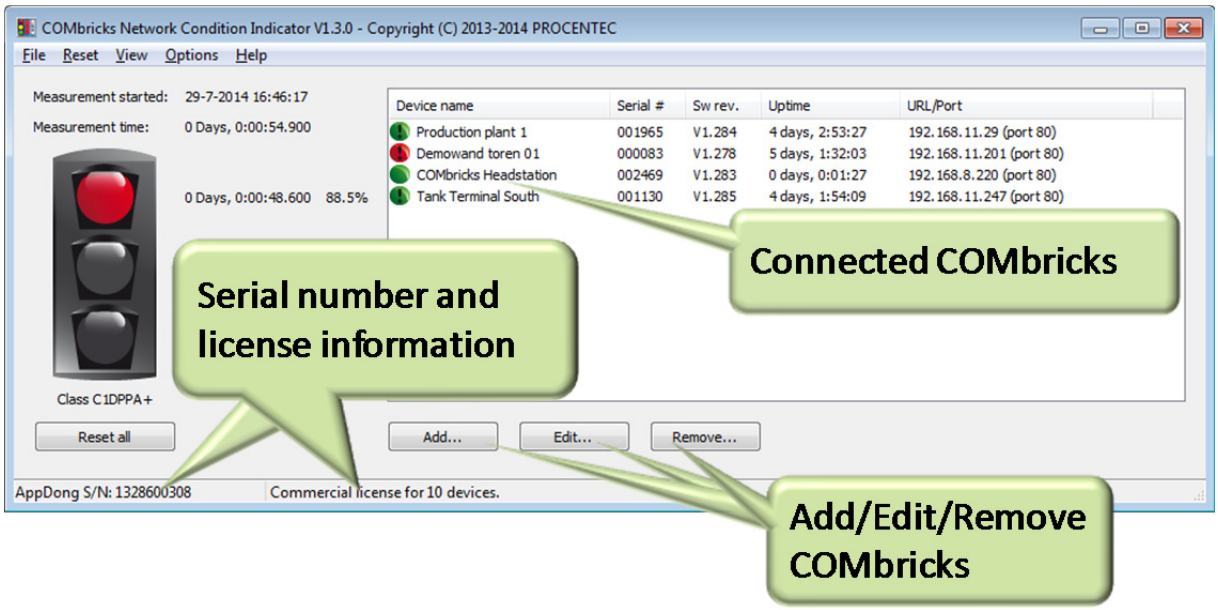

COMbricks Network Condition Indicator V1.3.0 - Copyright (C) 2013-2014 PROCENTEC
File Reset View Options Help
Measurement started: 29-7-2014 16:46:17
Measurement time: 0 Days, 0:00:54.900
0 Days, 0:00:48.600 88.5%
Class C1DPPA+
Reset all
Device name Serial # Sw rev. Uptime URL/Port
Production plant 1 001965 V1.284 4 days, 2:53:27 192.168.11.29 (port 80)
Demowand toren 01 000083 V1.278 5 days, 1:32:03 192.168.11.201 (port 80)
COMbricks Headstation 002469 V1.283 0 days, 0:01:27 192.168.8.220 (port 80)
Tank Terminal South 001130 V1.285 4 days, 1:54:09 192.168.11.247 (port 80)
Add... Edit... Remove...
AppDong S/N: 1328600308
Commercial license for 10 devices.
Connected COMbricks
Serial number and license information
Add/Edit/Remove COMbricks

Fig. 4 - Main window

3.1 List of connected ComBricks

3.1.1 Add a ComBricks Head Station

To add a ComBricks set, click 'Add…'. In the following window that pops up, you can add an IP address manually. Enter the port number of the ComBricks (default is 80). If the ComBricks Head Station has a User and/or Admin password, provide it. This is not required to view the traffic light status, but a password is required to be able to reset the measurements.

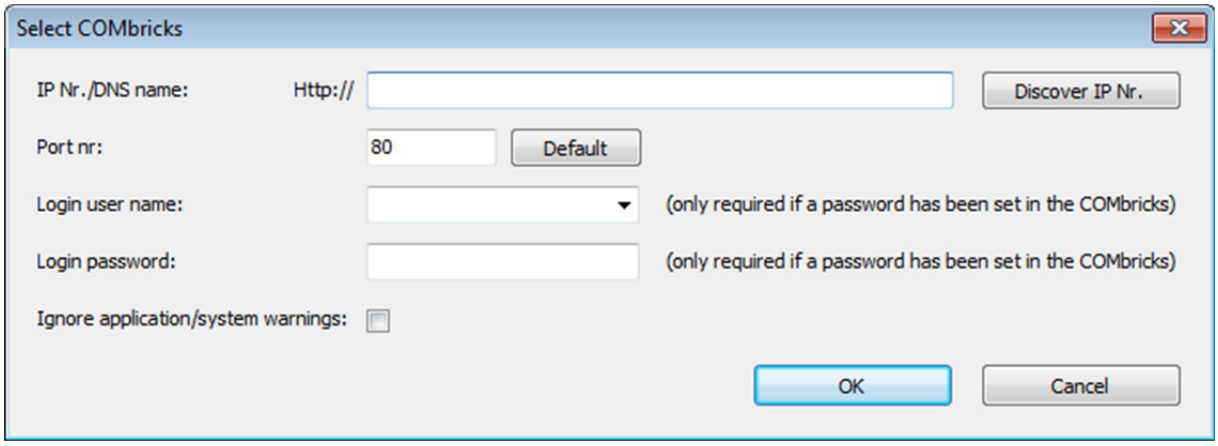


Fig. 5 - ComBricks selection dialog

If you do not know the IP address of the ComBricks that you wish to add, click 'Discover IP nr.'. This opens the Discovery Tool. For help on using this tool, refer to the manual of the Discovery Tool on http://procentec.com/downloads/ComBricks/ComBricks-QuickStart-Discovery-Tool-EN.pdf.

3.1.2 Edit a ComBricks Head Station

When a ComBricks Head Station entry must be edited, for example when the password or IP address has been changed, select the ComBricks in the list and click 'Edit'. Now you can make the required changes and click 'OK'.

3.1.3 Remove a ComBricks Head Station

To erase a ComBricks Head Station from the monitoring list, simply select that ComBricks in the list and click 'Remove…'. Click 'Yes' on the confirmation dialog.

It is also possible to delete the entire list of ComBricks. Go to 'File – Clear' in the menu bar, this will clear all ComBricks Head Stations.

3.2 The Traffic Light

The traffic-light style overview page indicates with easy colours how healthy the PROFIBUS system is.

This paragraph describes the rules for the traffic light; when the colour changes and if it can change back to green. It also explains the measurement details.

3.2.1 Measurement time and reset button

As soon as the Network Condition Indicator executable has started, the 'Measurement time' starts. You will see the start time and the measurement time.

To reset these measurement timers, go to the main menu and choose 'Reset all (Network Condition Indicator + Time counters)'.

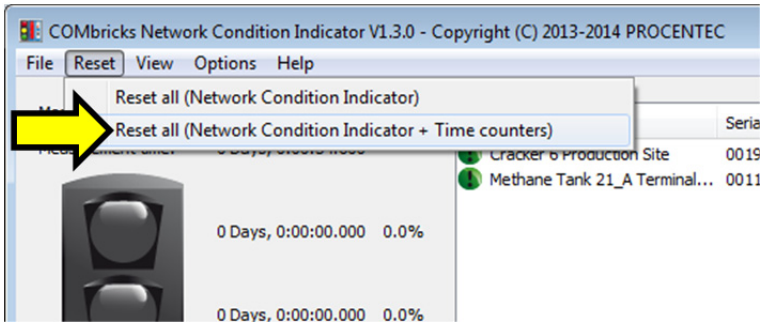


Fig. 6 - Reset measurements and/or timers

The 'Reset all'-button below the Traffic Light will reset all statistics and measured scope signals/Bar Graph info in ALL of the listed ComBricks. It will not reset the counters.

3.2.2 Traffic light rules

Every ComBricks monitors one or more PROFIBUS-networks. The traffic light will react according to the following rules:

Warnings/event based on telegrams:	Traffic light state:	Back to green state:
Critical diagnosis (Ext-diag)	🟡	Yes
Repeats	🟡	No
Syncs	🟡	No
Illegals	🔴	No
Device lost	🔴	No
Warnings/events based on physical measurements:		
DP Bargraph close to limit (25% of the set limit)	🟡	Yes
DP idle voltage close to limit (10% of the set limit)	🟡	Yes
PA Bargraph close to limit (10% of the set limit)	🟡	Yes
PA measurements close to limit (10% of the set limit)	🟡	Yes
DP Bargraph voltage below limit	🔴	No
DP idle voltage over/under limit	🔴	No
PA Bargraph over/under limit	🔴	No
PA measurements over/under limit	🔴	No

The last column 'Back to green state' indicates if the traffic light can go back to green during measurement after a problem is fixed. After certain events (e.g. repeats) the traffic light does not go back to green. The user must acknowledge this event with the 'Reset' button below the traffic light.

3.2.3 ComBricks Head Station details

If the Network Condition Indicator has turned yellow or red, the corresponding Head Station in the list of connected ComBricks will also have the same colour. You can view the details of this ComBricks Head Station by double-clicking on it in the list, or by selecting it and then right-click on it, and choose 'Details'.

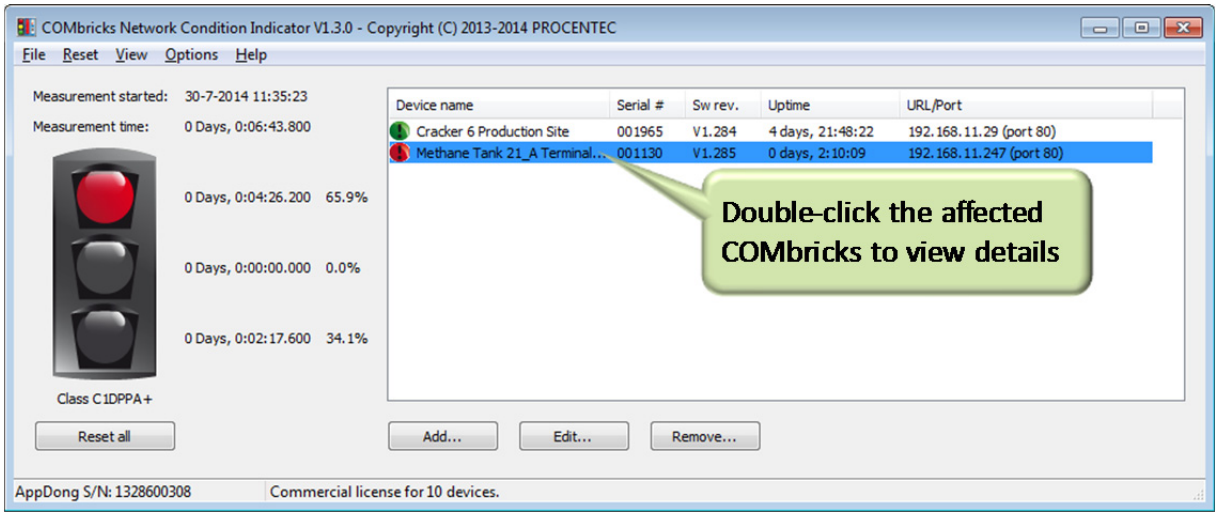

COMbricks Network Condition Indicator V1.3.0 - Copyright (C) 2013-2014 PROCENTEC
File Reset View Options Help
Measurement started: 30-7-2014 11:35:23
Measurement time: 0 Days, 0:06:43.800
0 Days, 0:04:26.200 65.9%
0 Days, 0:00:00.000 0.0%
0 Days, 0:02:17.600 34.1%
Class C1DPPA+
Reset all
Device name
Serial #
Sw rev.
Uptime
URL/Port
Cracker 6 Production Site 001965 V1.284 4 days, 21:48:22 192.168.11.29 (port 80)
Methane Tank 21_A Terminal... 001130 V1.285 0 days, 2:10:09 192.168.11.247 (port 80)
Double-click the affected COMbricks to view details
Add...
Edit...
Remove...
AppDong S/N: 1328600308
Commercial license for 10 devices.

Fig. 7 - Double-click a ComBricks in the list to view details

In this overview all PROFIBUS warnings are displayed. From here you can choose to reset the Indicator for this specific ComBricks, or browse to the webpage of the corresponding ComBricks to investigate further.

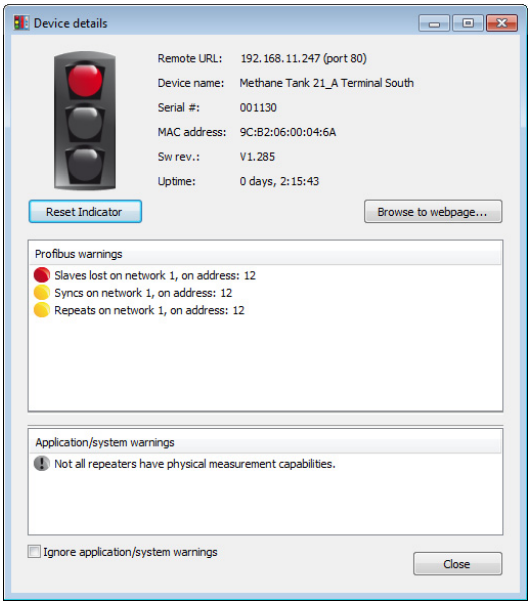
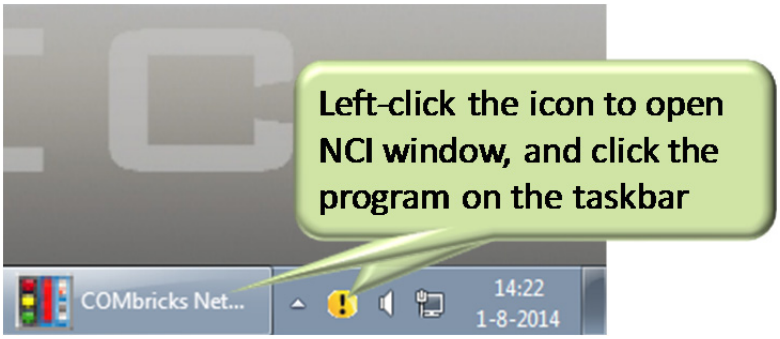

Device details
Remote URL: 192.168.11.247 (port 80)
Device name: Methane Tank 21_A Terminal South
Serial #: 001130
MAC address: 9C:B2:06:00:04:6A
Sw rev.: V1.285
Uptime: 0 days, 2:15:43
Reset Indicator
Browse to webpage...
Profibus warnings
Slaves lost on network 1, on address: 12
Syncs on network 1, on address: 12
Repeats on network 1, on address: 12
Application/system warnings
Not all repeaters have physical measurement capabilities.
Ignore application/system warnings
Close

Fig. 8 - Details of ComBricks details with PROFIBUS warnings

3.2.4 System tray icon

When the Network Condition Indicator is running, and a license for more than 3 ComBricks sets is active, a system tray icon appears with the same color as the current state of the Traffic Light. It allows easy access to the main window; simply left-click on it and click the program in the task bar to open the Network Condition Indicator.



3.2.5 System warnings: Exclamation mark

The traffic light indication can have an exclamation mark in the green, yellow or red colour. The reason for this is an application or system warning from the ComBricks.

In any of these cases you will see an exclamation mark in the traffic light:

- Unable to connect to the device ([number] attempts)
- Some transactions with the ComBricks failed: [number] since last connect.
- Not all repeaters have physical measurement capabilities.
- The license implies that not all available networks have ProfiTrace-OE capabilities.

To disable the exclamation mark and the corresponding message, click 'Ignore application/system warnings' for each ComBricks Head Station.

3.3 Minimized view

If you want the Network Condition Indicator to take up less space on the Windows desktop, choose ‘View – Minimized view’. This will reduce the window to only the traffic light, while the menu function ‘Reset’ is still available.

You may also choose to enable ‘Always on top’ so that the traffic light is always visible on the screen.

The system tray icon (described in paragraph 3.2.4) remains active in Minimized mode.

3.4 Changing language

When new languages become available, you can download these from our website. Put the language file (format: lang.xxxxx.dat) in the same folder as the executable of the Network Condition Indicator and restart the program. Next, go to ‘Options – Settings’ in the menu bar, and choose your language. Click apply and restart again.

4. Sales offices and distributors

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5. About PROCENTEC

PROCENTEC is a specialist in PROFIBUS and PROFINET technology and develops products to optimise the production processes of end users. Our innovative solutions ensure that our customers successfully operate in the world of industrial automation and enjoy maximum results from their processes.

PROCENTEC globally supplies all the components required to install a measurable and controllable network. Our products measure, signal and connect the various elements of a process installation and ensure it runs optimally. We develop and produce all products in the Netherlands and export them through our worldwide distribution network. PROCENTEC also is the international accredited Competence and Training centre for PROFIBUS and PROFINET. We provide training courses that help employees using those techniques optimally for their business objectives. In addition we also provide the necessary support to end users during their implementation procedures, certification processes, audits and malfunctions.

We are of the opinion that the industrial markets need the confidence of believing in the reliable PROFIBUS / PROFINET technology and applications, to ensure their processes are not threatened in any way and the continuity remains guaranteed. In view of the possible negative consequences and impact in that industry, we therefore think that those companies have the right to the best solutions and honest expert advice. Based on that belief, PROCENTEC continues to innovate and develop, which makes us the most reliable service provider and knowledge partner for our customers. We do all of this with total dedication.

We believe that it is important to communicate with our customers, partners, distributors and suppliers in a transparant and decent way. We are empathic, truly interested and passionate in everything we do. Quality, continuity, service and sustainability are essential to us. That enables us to provide our customers with groundbreaking and tailormade solutions.

Products

- ProfiTrace
- ComBricks
- ProfiHub
- PROFINET tools
- Cables and connectors

Training courses

- PROFIBUS training courses
- PROFINET training courses
- Product training courses

Services

- Competence centre
- Support & Consultancy
- Network certfication & Audits
- Testlab & Democenter

6. Certificates

QualityMasters
ISO Certificering

certificate

QualityMasters hereby declares that

Procentec B.V.
Wateringen

has a management system that meets the requirements of the standard

NEN-EN-ISO 9001:2008

for the scope

Providing training courses, technical support, product development and the exploitation of the test laboratory.

Date of original approval	10-02-2003
Date of issue	10-04-2013
Valid until	10-02-2016
Certificate number	NL 6313uk

On behalf of Stichting QualityMasters,

N.B. The failure to meet the conditions as set forth in the certification agreement, or non-compliance with the given standard and/or guidelines, may lead to the suspension or cancellation of the certificate.
This certificate remains the property of Stichting QualityMasters, Nieuwland Parc 157, 3351 LJ Papendrecht.

PI
PROFIBUS • PROFINET

Certificate
for a PI Competence Center

PI confirms that

PROCENTEC
Klopperman 16
2292 JD Wateringen
THE NETHERLANDS

is a fully accredited PI Competence Center for
PROFIBUS basic and PROFIBUS PA.

This certificate is granted according to the Quality of Services Agreement for PI Competence Centers and is valid for 2 years, until December 31, 2015.

(Official in Charge)

Chairmen of PI

(Karsten Schneider, Chairman)

PROFIBUS®

(Michael J. Bryant, Deputy Chairman)

7. Revision history

Version 1.0
- Initial release

8. Notes

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